

COMPLETING MARKER TESTS—PART 11
USING OFFICE TEST FRAME TEST CIRCUIT SD-27633-01 (J23260)
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is Part 11 of a series of sections for marker tests previously covered in Section 218-423-501.

1.02 This issue affects Equipment Test Lists.

1.03 The tests covered are:

AX. Line Link Pulsing (LLP) Features: This test checks the proper operation of the marker line route relays on calls using LLP line circuits.

AY. Toll Diversion Feature: This test checks that the marker will ground the RV1 lead to the originating register on a call from a PBX requiring toll diversion.

1.04 Lettered Steps: A letter a, b, c, etc, added to a step number in Parts 3 and 4 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

3. PREPARATION

STEP

ACTION

VERIFICATION

All Tests

- | | | |
|---|---|--|
| 1 | At OTF— Restore all keys and switches. | |
| 2 | Set L-L switch to 0. | |
| 3 | Set PS switch to 11/56. | |

2. APPARATUS

All Tests

2.01 Office Test Frame (OTF).

2.02 Trouble indicator and connector circuit (TIC).

Test AX

2.03 322A (make-busy) plug.

2.04 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) as required. (Use with tools specified in 2.05 through 2.07.)

2.05 624A (terminal connector) tools (used for making test connection to winding terminals of wire-spring-type relays) as required.

2.06 KS-6278 connecting clips (used for making connection to battery and ground terminals) as required.

2.07 651D (relay contact connector holder) tool (used for holding relay contact connector tool when making test connections to fixed contacts of wire-spring-type relays).

Test AY

2.08 32A test set.

SECTION 218-423-511

| STEP | ACTION | VERIFICATION |
|-------------|---|---------------------|
| 4a | If TOUCH-TONE® dialing is desired— Operate TT key. | |

4. METHOD

| STEP | ACTION | VERIFICATION |
|-------------|---------------|---------------------|
|-------------|---------------|---------------------|

AX. Line Link Pulsing Features

**Treatment by Office Code—Operation of LR_ Relay
From Code Point**

| | | |
|----|---|--|
| 5 | Operate OTL, 7D, MCB keys. | |
| 6 | Operate MKR_ key for marker under test. | |
| 7 | Set CST, CSU switches for class of service having access to LLP route. | |
| 8 | Set A through G DIAL switches as required to direct call to unrestricted LLP station associated with office code equipped for LLP only and with all assigned numbers associated with same line route (LR_) relay. | |
| 9 | Operate CB key. | |
| 10 | Operate ST key. | At TIC— RCT_, OSG_ lamps lighted. FUT_, VGT_, VFT_, HGT_ lamps lighted identifying line location of line link pulsing circuit associated with called number. |
| 11 | Restore ST key. | |
| 12 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 13 | Restore all keys and switches. | |

**Treatment by Thousands Block—All Numbers in
Thousands Block Associated With Same LR_ Relay**

| | | |
|----|--|--|
| 14 | Operate OTL, 7D, MCB keys. | |
| 15 | Operate MKR_ key for marker under test. | |
| 16 | Set CST, CSU switches for class of service having access to LLP route. | |
| 17 | Set A through G DIAL switches as required to direct intraoffice call to LLP station | |

| STEP | ACTION | VERIFICATION |
|---|---|--|
| | associated with an office code equipped with thousands block containing only LLP numbers associated with same LR_ relay. | |
| 18 | Operate CB key. | |
| 19 | Operate ST key. | At TIC— RCT_, OSG_ lamps lighted. FUT_, VGT_, VFT_, HGT_ lamps lighted identifying line location of line link pulsing circuit associated with called number. |
| 20 | Restore ST key. | |
| 21 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 22 | At OTF— Restore all keys and switches. | |
| Treatment by Hundreds Digit—Thousands Block Contains Only LLP Numbers—All Numbers in Hundreds Group Associated With Same LR_ Relay | | |
| 23 | Operate OTL, 7D, MCB keys. | |
| 24 | Operate MKR_ key for marker under test. | |
| 25 | Set CST, CSU switches for class of service having access to LLP route. | |
| 26 | Set A through G DIAL switches as required to direct intraoffice call to unrestricted LLP station associated with office code equipped with thousands block containing only LLP numbers in which hundreds block is associated with same LR_ relay. | |
| 27 | Operate CB key. | |
| 28 | Operate ST key. | At TIC— RCT_, OSG_ lamps lighted. FUT_, VGT_, VFT_, HGT_ lamps lighted identifying line location of line link pulsing circuit associated with called number. |
| 29 | Restore ST key. | |
| 30 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 31 | Restore all keys and switches. | |

| STEP | ACTION | VERIFICATION |
|--|---|--|
| Treatment Determined by Hundreds Digit—Thousands Block Contains Only LLP Numbers—All Numbers Require Individual Treatment | | |
| 32 | Operate OTL, 7D, MCB keys. | |
| 33 | Operate MKR_ key for marker under test. | |
| 34 | Set CST, CSU switches for class of service having access to LLP route. | |
| 35 | Set A through G DIAL switches as required to direct intraoffice call to unrestricted LLP station associated with number group selected depending on hundreds digit and with more than one LR_ relay associated with a hundreds block. | |
| 36 | Operate CB key. | |
| 37 | Operate ST key. | At TIC— RCT_, OSG_ lamps lighted. FUT_, VGT_, VFT_, HGT_ lamps lighted identifying line location of line link pulsing circuit associated with called number. |
| 38 | Restore ST key. | |
| 39 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 40 | At OTF— Restore all keys and switches. | |
| Number Group Determined by Hundreds Digit and Using Thousands Digits of an Unequipped Number Group (AST Relay Operated) | | |
| 41 | Operate OTL, 7D, MCB keys. | |
| 42 | Operate MKR_ key for marker under test. | |
| 43 | Set CST, CSU switches for class of service having access to LLP route. | |
| 44 | Set A through G DIAL switches as required to direct intraoffice call to unrestricted LLP station associated with number group selected depending on hundreds digit and using thousands digit of unequipped number group. | |
| 45 | Operate CB key. | |

| STEP | ACTION | VERIFICATION |
|------|---|---|
| 46 | Operate ST key. | At TIC— RCT_, OSG_ lamps lighted. FUT_, VGT_, VFT_, HGT_ lamps lighted identifying line link pulsing circuit associated with called number. |
| 47 | Restore ST key. | |
| 48 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 49 | At OTF— Restore all keys and switches. | |

Call to Restricted Station

| | | |
|----|---|---|
| 50 | Operate OTL, 7D, MCB keys. | |
| 51 | Operate MKR_ key for marker under test. | |
| 52 | Set CST, CSU switches for class of service having access to LLP route. | |
| 53 | Set A through G DIAL switches as required to direct intraoffice call to restricted LLP station. | |
| 54 | Operate CB key. | |
| 55 | Operate ST key. | At TIC— BN lamp lighted. FUT_, VGT_, VFT_, HGT_ lamps lighted identifying line location of announcement, intercept, or attendant trunk. |
| 56 | At OTF— Restore ST key. | |
| 57 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 58 | At OTF— Restore all keys and switches. | |

Blank Number Intercept

| | | |
|----|---|--|
| 59 | Operate OTL, 7D, MCB keys. | |
| 60 | Operate MKR_ key for marker under test. | |
| 61 | Set CST, CSU switches for class of service having access to LLP route. | |

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| STEP | ACTION | VERIFICATION |
|-------------|--|---|
| 62 | Determine from office records an LLP customer group number and associated LN (00-119) ST marker cross-connection. (If possible select customer group routed to intercept.) | |
| 63 | Set A through G DIAL switches as required to direct intraoffice call to LLP station associated with cross-connection selected. | |
| 64b | If customer group routed to trouble intercept is not available— At jack, lamp, and key circuit— Insert make-busy plug into M_C_MB jack associated with marker under test. | |
| 65b | At marker frame— Disconnect LN(00-119) ST cross-connection associated with LLP customer group number selected and temporarily cross connect to BNTH. | |
| 66 | At OTF— Operate REC key. | |
| 67 | At TIC— Momentarily operate RLS key. | |
| 68 | At OTF— Operate ST key. | Call completed to intercept. At TIC— BN lamp lighted. |
| 69 | At OTF— Restore ST key. | Connection released. |
| 70 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 71 | Restore all keys and switches. | |
| 72b | If customer group routed to trouble intercept is not available— At marker frame— Remove temporary cross-connection placed from LN(00-119) ST to BNTH and replace cross-connection removed in Step 65b. | |
| 73b | At jack, lamp, and key circuit— Remove make-busy plug from M_C_MB jack. | |

| STEP | ACTION | VERIFICATION |
|-----------------------------------|---|-----------------------------------|
| AY. Toll Diversion Feature | | |
| 5 | At jack, lamp, and key circuit— Insert make-busy plug in M_C_MB jack of marker under test. | |
| 6 | At OTF— Operate MCB, MKR_ keys for marker under test. | |
| 7 | Set CST, CSU switches to select PBX class of service requiring toll diversion. | |
| 8b | If digit 0 or 1 access code is provided— Operate _D key. | |
| 9b | Set A DIAL switch to 0 or 1. | |
| 10b | Set B through L DIAL switches to direct call to a route requiring PBX toll diversion. | |
| 11c | If digit 0 or 1 access code is not provided— Operate _D key. | |
| 12c | Set A through K DIAL switches to direct call to a route requiring PBX toll diversion. | |
| 13 | Operate OTL, OGT, REC keys. | |
| 14 | At marker under test— Insert plug of 32A test set into RC jack. | |
| 15 | Operate white (ST) button on 32A test set. | At marker— TDK relay operated. |
| 16 | Operate red (RL) button on 32A test set. | TDK relay released. |
| 17 | Remove plug of 32A test set from RC jack. | |
| 18 | At jack, lamp, and key circuit— Remove make-busy plug from M_C_MB jack. | |
| 19 | At TIC— Momentarily operate RLS key. | All lamps extinguished. |
| 20 | At OTF— Restore all keys and switches. | |

